ME/D 2 doses ME/D 1 dose Induction of protective immunity by ME/D vaccination rME/D Control antigen 2 doses L 1.E+06 1.E+05 1.E+07 1.E+05 + 1.E+04 ME/D DNA ME/D Figure 1  $\mathbf{m}$ Ш Empty vector 1.E+05 1.E+04 1.E+03 1.E+06 1.E+04 M. bovis BCG BCG 4 PBS 1.E+05] 1.E+061 1.E+04 1.E+04 1.E+05 նսող Spleen M. tuberculosis CFUs in

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Figure 2

Proliferative responses by lymph node cells from mouse immunized subcutaneously with recombinant multi-epitope constructs

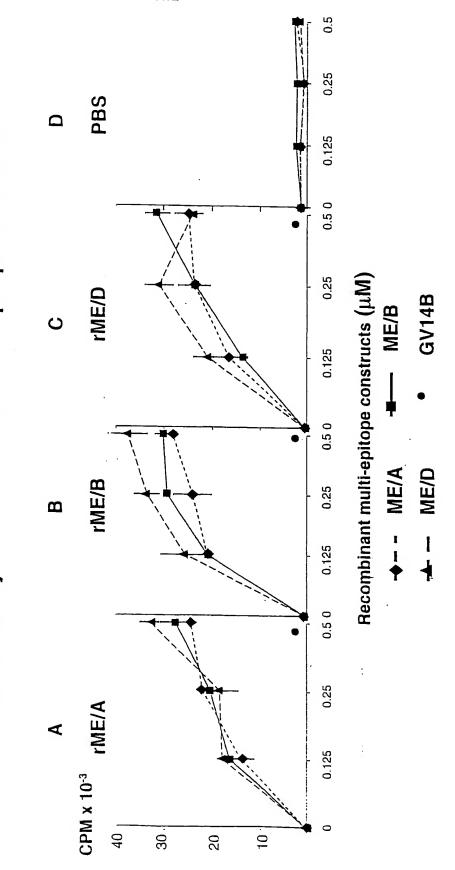
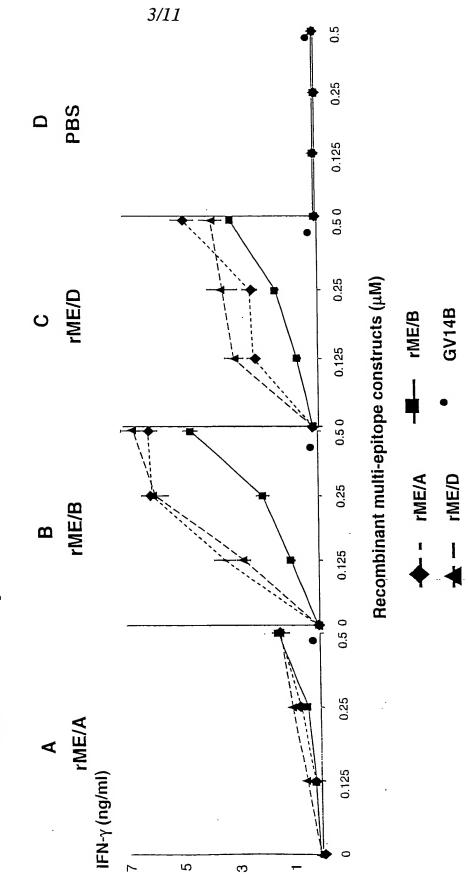
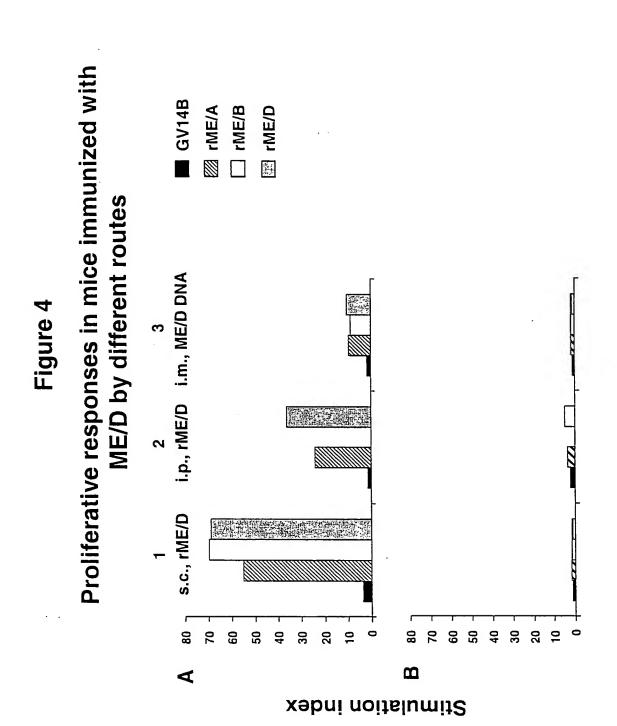


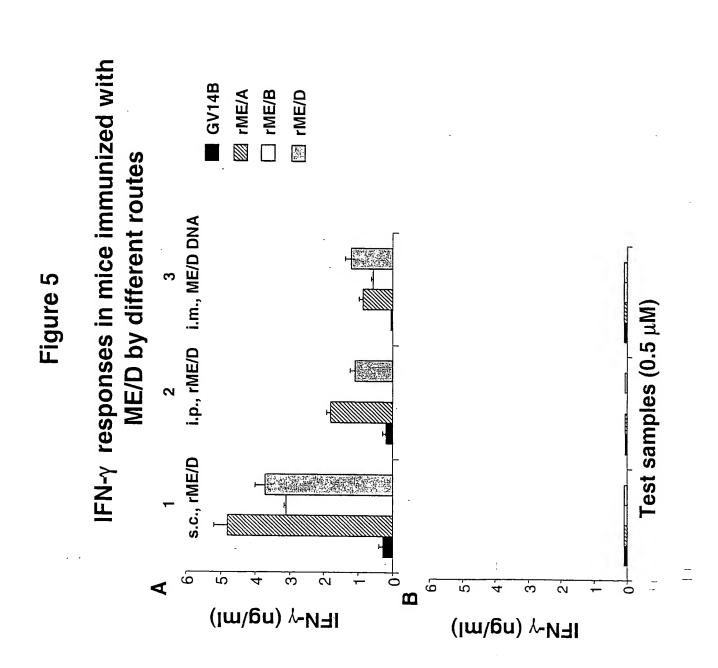
Figure 3

IFN- $\gamma$  production by lymph node cells from mice immunized subcutaneously with recombinant multi-epitope constructs

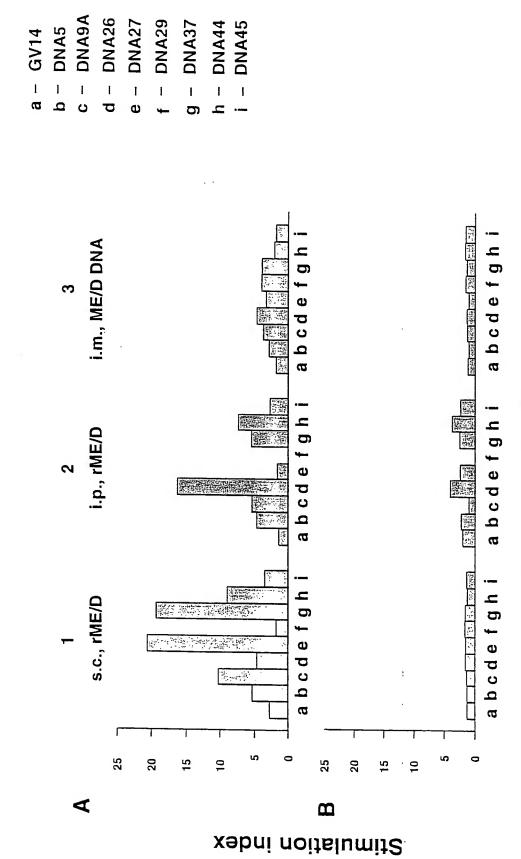




Test samples (0.5  $\mu$ M)



Contribution of single epitopes to proliferative responses in mice immunized with ME/D by different routes Figure 6



Test samples (2 μM)

Contribution of single epitopes to IFN-y production in mice Figure 7

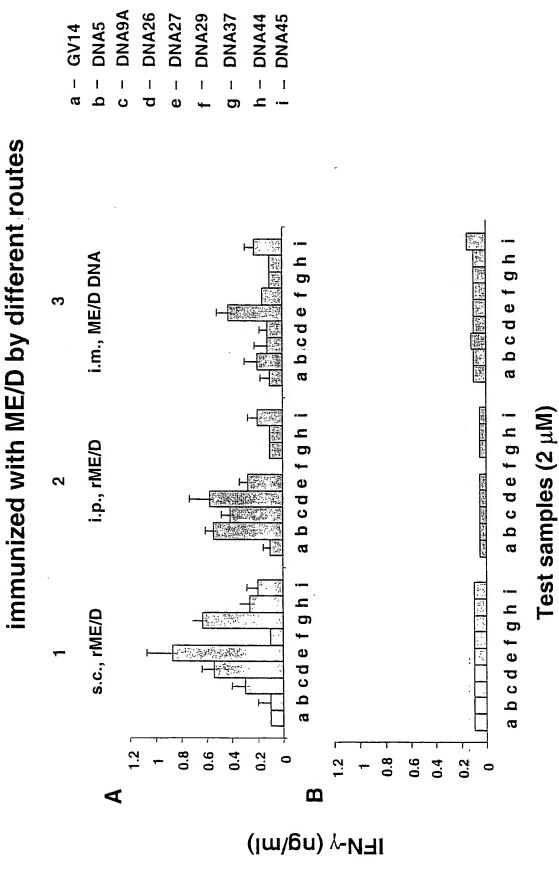
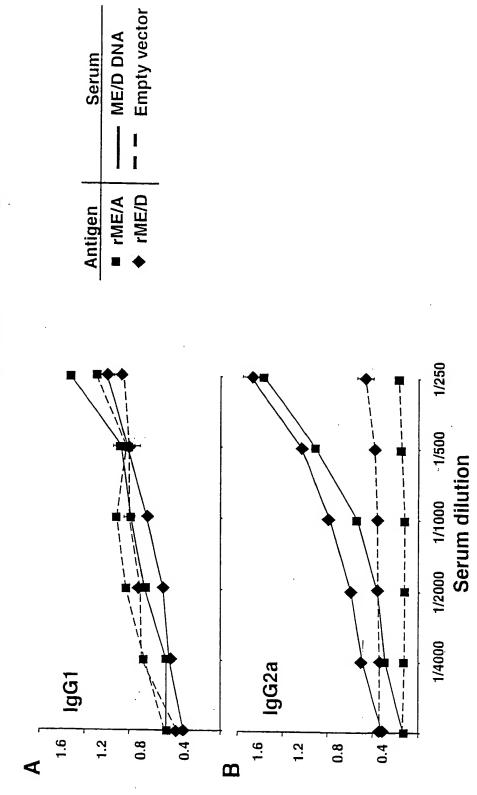


Figure 8

in the serum of mice immunized with ME DNA Titre and subclass of anti-ME antibody

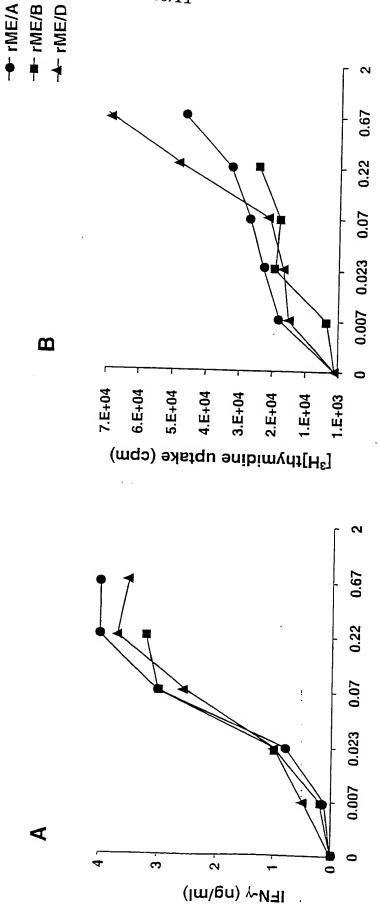


Absorbance at 490 nm

Memory splenocytes □ Control splenocytes 0.33 0.11 0.03 IFN-y production by memory splenocytes of BALB/cByJ mice rME/D (µM) 0.5-.5. DNA DNA DNA DNA 26 27 37 44 Figure 9 **GV14B DNA DNA**  $\mathbf{\omega}$ 2 0.5 .5. Media Con Α PPD M. vaccae 2μg/ml 10μg/ml 10μg/ml Ø 25<sub>1</sub> 20 15 10 Ŋ IEN√ (ng/ml)

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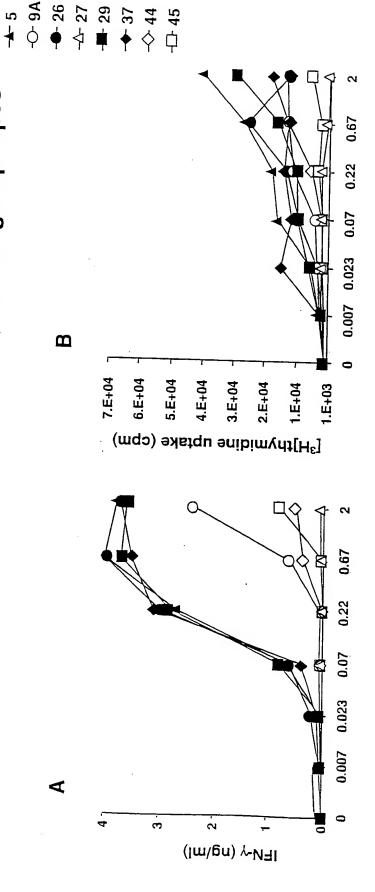
IFN-y production and proliferative responses of human PBMC after in vitro stimulation with rME/A, rME/B and rME/D Figure 10



Recombinant multi-epitope constructs ( $\mu$ M)

after in vitro stimulation with recombinant single epitopes IFN-y and proliferative responses of human PBMC

Figure 11



Recombinant single epitopes ( $\mu$ M)